THE TRAINING SCHOOL BULLETIN

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THE
TRAINING SCHOOL BULLETIN

MARCH, 1942

MEMOIR

Harry H. Hankins

1870 - 1942

His life was gentle; and the elements
So mixed in him, that nature might stand up
And say to all, This was a man.—Shakespeare

Mr. Hankins, loved, trusted and honored, passed on to his coronation on February ninth, 1942. From an abundant life abounding in good deeds, with a faith as changeless as the towering cedars sheltering woodland paths of his homestead, his was a triumphant entry into an eternal realm as real to him as the scenes of his beloved Menantico.

Born at Dorchester on July 28, 1870, only a few miles from the site of Cedar Knolls, his last earthly home, Mr. Hankins was a lifelong resident of Cumberland County. His boyhood days were spent close to nature, where singing birds and rippling streams captivated him. Throughout life the harmonies of the out-of-doors thrilled him. In young manhood he removed to Bridgeton and learned carpentering. Mastering his chosen trade he developed into a builder of recognized ability. One of his monuments is the Cumberland County court-house.

In early life his opportunity for book learning was limited, but education never was neglected by him. His life was a shining and convincing example of the rightfulness of 'the American way.' Hardships were his stepping-stones. Accomplishments were his inspirations. Success in many lines of endeavor was his attainment.

At the time of his death he was president of the Farmers and Merchants National Bank of Bridgeton, the Cumberland Mutual Fire Insurance Company, the Millville Water Company, H. H. Hankins & Brother Lumber Company and E. L. Warren Lumber Company. He was treasurer of the Young Men's Building and Loan Association, the largest association in Bridgeton, of the Martin Dyeing and Finishing Company and William T. Laning & Son Canning Company. He was a director of several other business companies.

Aside from his business connections he was an offiical of Central Methodist Church of Bridgeton and a trustee of the Vineland Training School. From 1926 to the time of his death he served the Training School faithfully and well.

Mr. Hankins' business acumen was remarkable, but more noteworthy were his high qualities of character. Christian ideals dominated all his acts. His relations with his fellow-men were characterized by gentleness, courtesy and geniality. These traits combined with a natural gift of leadership made up a personality of sterling worth, and that was Harry H. Hankins.

Surviving him in his immediate family are his wife, with whom he recently celebrated his fiftieth wedding anniversary, and a daughter, Mrs. Mary Marshall of Bridgeton.

Mr. Hankins will be missed, and nowhere more than at the Vineland Training School.

The Three R's of Handwriting*

Ruth Hansen

Physical Therapist, Babbitt Hospital
The Training School, Vineland, N. J.

In every school of any size can be found the slow child who seems able but who cannot maintain the standard at which the teacher and principal feel he should be working.[10] The chances are great that this slowness has been characteristic since birth, first noticed when at about one year of age, when his parents expected him to start to walk. Perhaps he walked when he was two years old and talked when he was two and a half, which would place his early movement performance from six months to a year behind schedule.[3]

When he first entered school, he was usually in the lower group in his class, or at best, no better than average. Perhaps it was necessary for him to repeat grades. He seemed very awkward, learned to use simple tools such as scissors later than other children of his age. He stumbled more often than a boy should, or fell frequently. In writing, perhaps he was so slow as he grew older that he was seldom able to produce written assignments on time and in learning to read he was retarded. He may have had a peculiar eye defect having but one eye focusing properly or having both eyes move involuntarily when they should be focusing. When he held a pencil he became a tight little knot bent close to his desk, rigid from head to foot. In all probability he was left-handed and sometimes printed, wrote, or read upside down or backwards.

There are various causes which contribute to certain phases of lagging development such as that pictured above. Among these are feeble-mindedness, poor nutritian, poor environmental conditions, and faulty emotional responses. This discussion is concerned with none of these, but with another condition which until recently has completely escaped diagnosis in its mild forms. This is now known sometimes to be the cause of this type of retardation.[8]

* Read at the New Jersey Education Association at Atlantic City 1941 and printed here through the courtesy of **The Educator.**

This abnormal condition is a form of cerebral palsy in which the muscles cannot function properly or at best, are retarded both in immediate functioning and in development. Cerebral palsy is caused by a brain lesion due to hemorrhage, faulty development, encephalitis or other infection, or anoxemia.[12] [5] This lesion may occur before, during or after birth. Such an accident may cause mental deficiency, motor deficiency or both. In the present instance we are supposing the child to have a very mild case of cerebral palsy affecting only the nerve and muscle movement machinery. His intelligence quotient is somewhere within normal limits, let us say, 98, but because of his retardation in motor function, it has been concluded that he must be mentally retarded. This conclusion has probably been reached even after testing with certain standard tests,[8] [9] results of which depend very largely upon timed movement responses. It has been found that approximately three-fourths of cerebral palsied children are of normal mentality, "one in four being mentally defective to the extent of having borderline of feeble-minded intelligence;"[9] . . . . .

There are two main types of cerebral palsy.[12] One called spasticity causes stiffness in muscles, and slow movement responses. In the other, known as athetosis, involuntary movement is present. A third less often seen is called ataxia in which the problem is largely one of balance. The injured part of the brain in athetosis, fails to inhibit the unneeded motions in its inability to function, thereby allowing these involuntary movement impulses to pass unchecked over the motor nerves to muscles anywhere in the body. Grotesque interfering movements occur, hindering or preventing normal motion. Such a child sometimes tries to control these movements with voluntary tension. Both spastic and athetoid children have been erroneously called "the spastic child" and the entire group has been thought of as "spastics."[1] [4] All the manifestations mentioned above may be so mild as to completely escape identification. All that is known is that the child is retarded.[12] [14] Any part or all of the musculature may be effected including speech, facial and respiratory muscles. This may explain why Johnnie grimaces, why Susie is so restless and hyperactive, why Betty speaks and moves so slowly.-Until recently it has not been realized that it explains also why certain children are unable to coordinate well in any activity from running to writing. If a child

cannot walk or run with normal speed and grace, it is possible that he will write with even less ease. Walking and running, big muscular activities, are normally learned many months before such a function as writing.

The muscles which are needed for writing do not begin in the fingers and end at the wrist. Since big muscle activity develops first, we will think primarily about the larger motions used in writing.

Muscles controlling the shoulder joint extend over the joint from their attachment on the shoulder blade, collar bone, and in some instances parts of the bony framework of the trunk and pelvis. These groups of muscles form considerable of the musculature of front, back, and sides of the trunk. The entire musculature of the shoulder, arm, and hand must be controlled in the act of writing a single character. Some of the muscles contract while others are relaxing, the whole movement picture changing in some degree every time a change of direction occurs in writing.

Besides the muscles directly used in writing, all others of trunk and neck maintaining the upright position of trunk and head must be controlled. Obviously, a great part of the movement machinery of the body is used directly or indirectly in the apparently simple act of writing, and another extensive area of muscles must be at the same time able to stop work and relax. In considering this fact, it can be easily seen why it is so often difficult, even when a pupil coordinates normally in larger muscular functions, to achieve a smooth flowing motion in writing. Even if the writing desired is of any type which uses chiefly the fingers, motions must occur from elbow to finger-tips in forming the characters, and in the shoulder as the pen moves across the paper and back.

Relaxation[1 2] plays a most important part in any well-coordinated muscular function. The ability must not only exist, but be well timed, just as in a riveting machine the hammer works only after another part of the machine has placed the rivet and waits while the hammer finishes its job. In other words, each muscle must relax while its antagonist contracts and vice versa. It is only by such intricate and reciprocating function among muscles that smooth-flowing writing may be produced. In addition, differential relaxation[6 7] or the actual relaxing of all muscles in the body is important in the preven-

tion of fatigue. This is an important reason why correct sitting position is considered so essential in writing.

In any muscular movement type of writing it can be said in general that in the upstroke of t, i, k, f, n, etc., the muscles that do the work of propelling the hand and pen are those on the front of the shoulder. The biceps and triceps on front and back of the upper arm maintain the angle at the elbow relaxing or contracting slightly as the angle changes. In the down strokes the situation in the shoulder is reversed and the muscles on the back of the arm do the work, while the anterior muscles relax. The back of the hand, forearm, front of fingers and thumb maintain a constant light tension of sufficient degree to hold the pen and keep the writing position of the wrist and hand, while the antagonists of these muscles relax, exactly enough to allow the position to be steadily held. These muscles also change enough in degree of tension whenever the direction of the writing stroke changes to accommodate themselves to the slight variation in position. Tension in the back or uppermost surface of the forearm can be externally felt in the writing position while holding a pen in readiness, by touching it with fingertips. If the hand is allowed to fall relaxed on the desk the hardness or tension disappears from the muscle.

It is with astonishment that one begins to realize the amazing number of direction changes and, therefore, the alternating contractions and relaxations that take place in writing. In the word "penmanship" there are nineteen upstrokes, which means there are nineteen contractions in the muscle which propels the arm and pen forward. Alternating with these are eighteen downstrokes, and all the oblique and horizontal lines and curves of upper and lower portions and closings of letters. Besides the nineteen forward movements (upstrokes) there are required eighteen contractions of the shoulder muscle moving the arm backward (downstrokes), as well as the contractions to left and right, each group moving the arm in these directions every time a left or right movement occurs. All the time writing is going on two groups of shoulder muscles are also keeping the arm and hand in motion from side to side over the paper. All this is done rhythmically. If for example, one writes the word "penmanship" slowly, in exaggerated size, emphasizing the up and down strokes, the sensation of rhythmical movement alternating with relaxation in two directions becomes plain.

It can thus be seen that relaxation is an essential intergral part of the rhythmical movement that constitutes writing. In writing the word "no" four upstrokes are made, the last one curving to the right to close the 'o' before the final horizontal line to the right These downstrokes alternate with the upstrokes. Two over and under curves, parts of the up and down strokes necessitate the use of the shoulder muscle which moves the arm outward to the side. In this two-letter word as the pen moves up and down, it is necessary for two antagonistic groups of muscles to make a total of seven contractions, immediately relaxing after each so that the opposing group can, at the identical moment of relaxation begin its contraction. Theoretically, if the front shoulder muscle first contracting on the upstroke, failed to relax at the top of the stroke the writing would stop. An alternative would be that the hand and fingers would take up the work and perform it. In this case the writing would no longer be the relaxed muscular movement type but some form such as the old-fashioned backhand or vertical. This is a probable explanation of the persistent use of the cramped hand in writing, with those who are slow in learning any of the relaxed shoulder methods.

In helping the motor-retarded child overcome his writing difficulties, the shoulder should be trained first, then the elbow, forearm and hand.[12] These joints should be trained in the normal movements and in relaxation before writing tools are placed in the hand. Training in relaxation should precede and accompany training in movement.

There are six normal movements performed by the shoulder joint; forward, backward, outward from the body and return to the side, and rotation outward and inward. It is obvious that all shoulder muscles are used in muscular movement writing since the characters used include lines which progress forward, backward and to right and left, and the hand must also be pivoted from left to right and back by the movement of inward and outward rotation, on the fleshy underpart of the forearm. This is probably the only constantly relaxed portion of the musculature of the entire upper limb in this type of writing.

After shoulder, elbow and hand have been trained to properly produce the normal movements in all positions, then the

tools of writing should be placed in the hand and the actual forming of lines and curves, the components of writing, should be started. First, writing strokes and curves should be large and on the blackboard. It may be necessary to start with a piece of carpenter's or other large chalk, gradually reducing the size of the writing tool. The first pencils or wax crayons should also be large. Yarn may be wound as a handle on a pencil to make it grasp easier. It may not be necessary to go through all the above steps in very mild cases of motor retardation. This would have to be judged according to the individual child.

The time this process will consume will depend upon the degree of impairment of coordination, the amount of tension present, and the ease with which smooth relaxed movement can be learned. It should be emphasized that it may require weeks or months, though in very mild cases it may not take so long a period of time.

If a cerebral palsied child is spastic, stiffness in movement is evident.[12] [14] If he is athetoid, involuntary movement is manifested. Amplitude of these motions can be large or small. If the case of motor retardation under consideration is due to spasticity, many repetitions of the movement being learned are necessary for correction of the difficulty. If it is caused by athetosis, more emphasis should be placed on relaxation than on performance of movement. Relaxation must be taught in spasticity also. The immediate aim of relaxation in this condition is to release the antagonist so its opponent may learn to move, while in athetosis the aim is to quiet all other muscles except the one whose performance is necessary and already knows how to move. Diagnosis should be made by a physician.

In writing and in all other small muscle activities in addition to the voluntary motion a type of involuntary movement known as overflow, frequently occurs among persons having normal muscular equipment. Especially in the first steps of learning to write, this is true as evidenced by the child who thrusts his tongue out, squints, grimaces or twists one foot about the chair-leg or the other ankle. This manifestation, known as overflow often occurs in exaggerated form in the cerebral palsied child, both spastic and athetoid. To overcome this, training must be emphasized in spastic, as well as athetoid, in "differen-

tial relaxation." This means, relaxation of all resting muscles during activity.

Here as in other problems encountered in the schoolroom, a probable solution may lie in cooperation with another department. An art teacher willing to teach a child of this motor-retardation type finger-painting would be teaching him shoulder elbow and hand motions and relaxation in all directions. This would be especially true if it were possible for the paper to be placed in different planes. Weaving on a large loom accomplishes the same purpose in the shoulders, but it is necessary that grasp should be quite well developed in order to do weaving. A physical education teacher could teach simpler relaxed arm and leg movements such as are used in Danish Gymnastics or the swinging, relaxed arm movements taught in elementary modern dance. In the woodshop are opportunities for big rhythmical movements of elbow and shoulder in planing long surfaces, sawing, etc.

At the same time definite training in motion is being given a program of general relaxation should be followed for a few minutes to a half hour daily. In this way, when the child is able to grasp a pencil or pen and write in the usual sitting position, he will also be more able to rid himself of the concomitant tension substituting relaxation in those parts of his body not in use. Thus he may be able to show a surprising improvement in smoothness of coordination in all activity and therefore in quality of writing.

Movement having smooth reciprocation because it is accompanied by or includes rhythmical relaxation, may be said to be the answer, not only for writing but for all the activities of the motor retarded, poorly coordinated child.

1 Boorstein, Samuel W. (M.D.) Orthopedics for teachers of crippled children. Aidem Pub. Co. 1935.
2 Crothers, Bronson, (M.D.) Education of the Handicapped Child. Am. J. Public Health 28: pp 340-342. Mar. 1938.
9 Doll, Edgar A. Ph.D. How old is Ann Socially. Hygeia 15:10 894.
4 Vineland Social Maturity Scale, Vineland Training School.
5 Heyman, Clarence H. (M.D.) Infantile Cerebral Palsy. Discussion on Etiology.
6 Jacobson, Edmund (M.D.) Progressive Relaxation. U. of Chi. Press '28.
7 Jacobson, Edmund (M.D.) You Must Relax. McGraw Hill Book Co. N.Y.C. 1934.
8 Lord, Elizabeth.
9 McIntire, J. Thomas Incidence of Feeble-Mindedness in the Cerebral Palsied. Am. Ass'n. on Mental Deficiency Proceedings. 43:2, 44-50. 1938.
10 McIntire, J. Thomas, Cerebral Birth Palsy Project, Babbitt Hospital, Vineland, N. J. State Crippled Children's Commission, Trenton, N. J.
11 Miller, Melba, Journal of Exceptional Children, March 1941.
12 Phelps, Winthrop M. M.D. Care and Treatment of Cerebral Palsies. Journal of American Medical Association 3: 1, 1-6.
13 Phelps, Winthrop M. M.D. Care and Treatment of Children Suffering From Cerebral Palsy. Papers and addresses given at National Conference of State Directors of Crippled Children's Service, held by Children's Bureau, Department of Labor of U.S.

The Vineland Scene*

By

Edgar A. Doll, Ph.D.

Director of Research, The Training School at Vineland, New Jersey

This district includes the Borough of Vineland and Landis Township situated in the north-east corner of Cumberland County in Southern New Jersey. The area as a whole affords a progressive semi-rural environment with business, shopping, and recreational proximity to metropolitan Philadelphia forty miles north and the seashore resorts between Atlantic City and Cape May forty miles east and south.

Vineland Borough is an enterprising business-residential town with a population of about 7,500 situated in the center of Landis Township. One hundred fifty miles south of New York City, and an equal distance north of Washington, it is in close contact with important cultural and economic centers. In the heart of important modern agricultural developments it is also within easy reach of a coastal "Worlds' Playground."

Landis Township, a politically distinct residential-rural district has a population of approximately 18,000. Numerous small industries are scattered in this area, but the major enterprises consist of poultry husbandry, horticulture, garden farming, and dairying.

The better known industrial products include commercial, laboratory and art glassware, a wide variety of clothing manufacture, paper specialties, building materials, food processing, and the usual trade and merchandising pursuits. Agriculturally the area is the second largest poultry center in this country; produces large quantities of frozen and dessicated perishable foodstuffs; commands first-grade markets for peaches, apples, sweet potatoes, peppers; enjoys a national reputation for producing bulbs and especially dahlia roots.

* Advance pages from "The Measurement of Social Competence: A Manual for the Vineland Social Maturity Scale" now in preparation. This passage describes the environmental area from which the sample of subjects was drawn for the normative standardization of the scale. It is published here because of widespread interest in this community in which so much work has been done in the field of mental test evaluation.—Ed.

The major development of the area dates from about 1860. The initial population was recruited from New England. Subsequently, thrifty farmers of Northern Italian derivation and Jewish agriculturists of Western European extraction settled here on small farms. Many urban dwellers have retired here to recover that peace which had not survived the pressures of large-city existence. Indeed, not a few celebrities such as the Barrymores, and others of at least equal talent though perhaps lesser fame, found or sought happiness at Vineland.

Here then is a cosmopolitan population composed of about one-third early American stock, another third of northern Italian extraction, and a final third of Jewish and Russian derivation. With a history of less than a century, but with these cultural backgrounds including many first-generation European emigrants, the "culture mass" affords varied representativeness. Neither great wealth nor dire poverty is represented, but rather a fair average of self-respect, thrift, enterprise, progressiveness and stability of purpose. Perhaps to a greater extent than most communities this one reflects a wide range of environmental versatility without marked concentration on any special phase, and a spread of population differences without particular peaks.

The physical area comprises seventy-six square miles of territory with a moderate climate resembling that of the south central Atlantic States at their "best" seasons. Hard-surfaced roads of ample mileage crisscross the district and afford ready access to larger population centers. The local claim to being "The Heart of Sunny Southern Jersey" is witnessed by the number and variety of national retail establishments and by other objective evidences which are relevant here as attesting environmental facilities. Church interest is high in spirit and broad in scope, with forty houses of worship representing twenty-five respected denominations. Likewise, more than fifty social and fraternal organizations serve the needs of desirable social progress for both sexes at all ages.

Vineland Borough and Landis Township, although politically separate, constitute a single school district. Public education is well served at high standards in twenty-eight public school buildings and one large accredited public high school. The latter offers varied curricula in classical, technical, business and vocational education. Two hundred teachers serve five

thousand pupils. In addition, fourteen Sisters teach seven hundred parochial school pupils from primary grade through high school. One opportunity school in Vineland Borough provides three special classes for mentally handicapped pupils, and the parochial school offers another. The district maintains one primary demonstration school in affiliation with the Glassboro State Teachers College (twenty miles north). It has also served as a locus for important survey studies in educational sociology conducted by the University of Pennsylvania School of Education as well as by the Vineland Laboratory. The Vineland State School (with about 1500 mentally deficient women and girls) and the Vineland Training School (a private residential school with about 530 children and adults of both sexes) are located one mile east of Vineland Borough. A well patronized Public Library and an active Historical Society materially extend these educational resources.

Recreational facilities (parks, playgrounds, lakes, nearby seashore, Y.M.C.A., Boy Scouts, and so on) are ample and vigorously exploited. Commercialized amusements, and wide opportunities for other forms of self-expression are not wanting. Public health is maintained on a high plane by numerous public and private agencies. A sixty-bed accredited hospital is augmented by various medical clinics (chest, orthopedic and so on) sponsored by Philadelphia specialists. The public spirit of the community is progressive and stimulating.

Department of Agriculture

Annual Report, 1941-42

Henry E. Renne—Farm Supervisor
The Training School, Vineland, N. J.

In the course of farming, it is seldom that we experience a rainy period and two severe droughts in one growing season. Such, however, was the case in our part of Jersey last summer. In spite of these conditions, it can be stated beyond a doubt that we had a very successful year as far as fruits and vegatables were concerned. A great deal of credit must be given to the irrigating system and the generous supply of water provided by our 150,000 gallon tank.

With a balmy season there always come pests of every kind with, it seems, renewed fervor and persistence. Last season was no exception for we had to fight and fight hard on every hand. All of our leafy vegetables were attacked as never before, and it is to be expected that these insects will give more and more difficulty every succeeding year.

Due to the nice warm spring, certain of our vegetables were harvested nearly a month earlier than the previous season, and the necessity of buying on the market was greatly curtailed. For example, carrots which were ready to harvest last year on July 8th were ready this year June 10th. The same was true of beets.

We set 12,000 tomato plants in the field in May and 6,000 more in June. No rain fell for several days after transplanting and they grew very slowly, but when rain finally came the plants made a beautiful growth and we harvested nearly seven tons to the acre. Their flavor was exceptionally fine because the meat of the tomato was firm, not watery as is often the case in a summer with considerable precipitation.

The fruit crop on the whole was good although pears and plums were a light yield. The peaches were excellent and because of little rain in the ripening period, we did not experience the terrific loss from brown rot which is so destructive in a wet season. The flavor was delicious and the keeping quality good.

They were not as large as last year, but even so some weighed 14 oz. The old orchard on Main Road produced some of the finest looking Elbertas one could hope to see. The cherry trees were a mass of bloom in the spring and as a result we picked nearly three times as many cherries as the season previous.

To supply the institution with sweet corn from June to October requires seven successive plantings of nearly an acre each at ten-day intervals. This year, we were able to provide an ample supply only by using the new hybrids which out-yield the open pollinated varieties. In this connection, it might be of interest to some that we pulled 80 dozen ears at one time on four rows across the field from the rear of Hutchinson Cottage to Spring Road. One could venture to say that with an open pollinated variety, we would scarcely have gathered 60 dozen ears. One might also raise the question, "What does the hybrid seed cost?" The answer is, "Nearly double, but the yield per acre is greatly increased." For example, to plant one acre takes 8 lbs. of seed costing $.80 for the open pollinated varieties and $1.60 for the hybrids. The open pollinated corn yields about 480 dozen ears per acre worth 18¢ per dozen, or $86.40. According to last year's yield, the hybrids harvest about 700 dozen ears per acre which amounts to $126.00. This represents a net increase in value produced of $38.80 per acre. Our total yield was 4050 dozen ears from six acres.

Last spring we mulched the raspberries with salt meadow hay to conserve moisture. The raspberries were especially large and we feel certain that this had much to do with it. We did the same with strawberries and also applied fertilizer with an aim to increase the size. This method proved to be very successful.

Comments from the people of the institution help us to know whether the varieties of vegetables we have selected to grow are proving satisfactory. For instance, the general praise of the celery makes it easy to decide that we are growing the right kind.

It is always interesting as well as somtimes profitable to experiment with vegetables and field crops. With this in mind, we have carried on several experiments on a small scale. First of all, in the fall of 1940, we tried out rye grass as a winter

cover crop and found it to be far superior to the old crops such as wheat and rye. We planted the rye grass in two adjoining sections of the garden. In the spring of 1941 we plowed it down and planted the sections to potatoes using different brands of fertilizer of the same analyses. We harvested these and found them to yield practically the same, although one fertilizer cost considerably more than the other. All in all, the yield was 600 baskets to the acre. One section was then planted to carrots and the other to beets. Their yield was 232 and 280 baskets respectively. The total production from the acre of land for the summer was 1112 baskets. The department feels quite proud of this record.

We tried two new varieties of string beans but they did not prove to be any better than the old ones. We also planted a western hybrid field corn which proved to be good, but this year expect to give our New Jersey hybrid seed a trial.

We not only tested new fertilizers but also new ways and methods of application with the aim in mind to determine the best method for our soil, our climate, and our crop.

In pursuit of this program, when we set a new asparagus bed this spring, the following procedure will be used: down in the subsoil where the new roots are to be placed, a mixture of ground limestone and phosphate will be applied. It will then be mixed thoroughly with the soil before putting in the asparagus roots. The reason for following such a plan is that not only do the surface soils show an acid condition, but the subsoils in which the roots should be encouraged to grow show considerably greater acidity. By placing the limestone and phosphate underneath the roots, the limestone will have a tendency to flocculate and make more porous heavy subsoil conditions and will also tend to keep the phosphorus from tying up in the acid soil, thus making it more readily available to plants. Therefore, instead of placing the limestone and phosphate on the surface and expecting it to work down, as has been the old practice, we place it right where the plants can use it immediately. It will be interesting to watch the results of this experiment.

Trouble developed in the soil in the greenhouse last Spring. Many plants died and many appeared to be stunted in growth. We immediately had the soil tested and proceeded to act on the tester's recommendations. The soil was first treated with tear

gas, then fertilized thoroughly and watered well all fall and winter. This spring only two cabbage plants in a total of 5710 have died. Likewise in our hotbeds we were faced this winter with a problem of destroying large white grubs which killed our fall lettuce. These beds have all been treated now with a mixture of carbon bisulphide and sulphated castor oil which forms a gas which penetrates the subsoil and kills all insect life. We do not expect trouble from this pest again for five years. In addition, the hotbed soil was removed during the winter and mixed and sifted with new topsoil so that any disease might be checked before having a foothold.

With conservation and defense measures in mind, we proceeded to give all our farming implements a good painting this winter. This was done entirely by the boys. Each piece was thoroughly cleaned and necessary repairs were made before applying the paint. We had two good reasons for doing this work, first for appearance's sake, and second that the life and usefulness would be greatly extended.

Today when our Government is calling upon farmers to produce more of everything, the facts learned from some of these new practices will have to be put to work. It will be expedient for us to grow an abundance in order to be able to store much in the event of an emergency. We not only should cooperate, but we must be conscious of cooperating with other departments, as our Director has stated. In this connection, we desire to point out that the cooperation rendered by the School Principal in furnishing the farm department with boys to help all summer and by the Supervisor in his personally accompanying them to their farm schedule is greatly appreciated. Loss through failure to harvest a crop at the proper time can be averted by just such good will.

In 1942, we are planning to raise not only more vegetables, but more poultry and more field crops. With a need for 450 pounds of chicken per week comes a need for more feed to raise them, hence our plans call for possibly 35 to 40 acres of corn. A great deal of planning by our poultryman is necessary in order to spread along throughout the year the right number of birds and have them the right age and weight for killing. This requires starting three broods a year in some houses.

If Providence smiles upon us in 1942, we shall endeavor to lay up in store all that we cannot use that those who are less

fortunate than we may be supplied, if the need should arise. It is hard for us who have never known what it means to go hungry to realize fully the extent of our peril in this respect. In accomplishing these things mentioned above, we will in a measure be carrying out the thought of Mr. Claude Wickard, our Secretary of Agriculture, when he said, "In the day of victory when the nations sit down at the peace table, our food stock piles ready to be drawn on by the famished people of the Old World will give great force to our views. For they will show once and for all that democracy builds for the needs of common men."

Dietary Department

ANNUAL REPORT, 1941-42

Mary Catherine Fridy, B. S.
Dietitian—The Training School at Vineland, N J.

"Food! On it hinges success or failure." Such was the fact in the last World War when Germany attempted to starve out the Allies with submarines that sent torpedoes against food cargoes

Today better nutritional standards are necessary in building strong men and women for the defense of our liberty. Saving means more than appears on the surface. To save the health of our people by raising nutritional standards is of vital importance.

"In every evil there is some good." This war will result in better nutrition the world over. Conscription has shown us the prevalence of nutritional deficiencies in the American diet. The periodicals are full of articles showing how we can substitute for shortages and become healthier on simpler foods with more nutritive value.

Our people must be educated to the highest standards of nutrition and taught economical buying of foods and how to assemble them to include all the elements necessary in the *daily* diet. The government has set the following as a guide to what is necessary to include in each day's menu:

Milk: For a growing child, ¾ to 1 quart
For an expectant or nursing mother, 1 quart

For other family members, 1 pint or more
Tomatoes, Oranges, Grapefruit, Green Cabbage, Raw Salad Greens: 1 or more servings
Leafy, Green or Yellow Vegetables: 1 or more servings
Other Vegetables or Fruit: 2 or more servings
Eggs: 1 a day or at least 4 or 5 a week
Lean Meat, Poultry, Fish: 1 or more servings
Cereals and Bread: At least 2 servings
Fats:
Sweets:
Water: 6 or more glasses

Our Training School children receive three-fourths to one quart of milk per day, either as a beverage or in cooking. For this we are grateful to our dairy at Menantico Colony. We have 1920 gallons of canned tomatoes for winter use and our farm supplies us with an abundance of fresh tomatoes in the summer. We have served spinach or kale once a week, and fresh carrots and beets three or four times each week For other vegetables and fruits, our children receive parsnips, turnips, white and sweet potatoes, dried peas and beans, prunes, canned rhubarb and peaches, and an abundance of fresh apples. In the summer we have a great variety of fruits and vegetables. We have been fortunate in securing from our Poultry Department a plentiful supply of fresh eggs. We try to serve lean meat, poultry, or fish and meat substitutes such as cheese, scrapple, dried beef, or frankfurters. Cereal is served at every breakfast and spaghetti or rice is served once or twice each week. Bread is served every meal. We encourage the use of whole wheat bread wherever possible. Sweets are derived from puddings, cakes, pies, fruits, syrups, fruit butters, and sweetened beverages. Water is available at all times.

In the Allied Campaign to win the present war it is our duty to do all we can to help in the conservation of food, as the necessity of food is as important as bullets in winning the war.

The Department of Agriculture has estimated that $700,000,000 of food is wasted annually in the American homes. Today it is more necessary than ever before to eliminate this waste. To do this we must prepare sufficient quantity of food to eliminate left-overs; we must cut out all waste in paring and

trimming of foods; we must do away with all waste such as burning, spoilage, and loss of nutritive content in paring and cooking food; above all we must starve the garbage pail.

To insure a prevalence of factors that make for a balanced diet, we need less refining of staple foods to add food substances that have been removed in refining to the finished product. As, for example, the millers and bakers have been asked to produce enriched flour and bread. Plain refined flours and breads are now being enriched with thiamin, nicotinic acid, riboflavin, and iron as recommended by the Committee on Food and Nutrition of the National Research Council. We are happy to report that the baker who supplies us with our bread is following this advice and we are being supplied with the new "enriched" bread.

Sugar is another refined food on which the American people depend too much. The daily consumption of sugar in the United States averages five and one-half ounces per person. With the present government control we shall adjust ourselves to the requirements. With this great reduction our appetites will be saved for more nourishing foods. If we substitute enriched fats, fruits and vegetables with their abundance of vitamins and minerals our standards must be raised. Much of the candy and softdrink industry could be disposed of to the benefit of the health of our people and we could acquire our sugar needs from natural sources such as fruits and vegetables. We could omit sugar from tea and coffee or reduce our present consumption in these beverages to one-half or one-third. By carefully stirring the beverage to omit the accumulation left in the bottom of the cup quantities of sugar could be saved without lessening the sweetness of the beverage.

In the future we will strive to maintain and raise our present nutritional standards; we will continue to strive against waste in every form; and as a result we hope to have happier, healthier people in our School. "Happiness first, all else follows."

So Proudly We Hail

It was just a little incident that probably has less significance than one would read into it—but it was, to me, inexpressively impressive.

The cottage attendant and I were sitting in the outer reception room, from which we could look in on the boys playing with their mechanical toys or leafing through their picture books on the floor or around the tables. Of all the 20-odd children in the cottage probably none has the interests or cares of a child above six years of age.

The radio—a source of much joy to these handicapped children—which was playing rather softly served as a background for the happy, irrelevant chatter. As we in the outer room talked I subconsciously became aware of a sudden silence broken only by the music, and I glanced up to see every child standing on his feet. Toys were momentarily abandoned, the fragments of humming and chattering had ceased as if by order. Each boy stood by his chair, and those who were crippled were supported by others only slightly less handicapped than they. The United States Marine Band was broadcasting The Star Spangled Banner! The sight of these men with children's minds standing in respect at the playing of a tune for which they had a reverential, if uncomprehending, awe must surely have a moral. But if not that, I know it's an inspiration that strikes deeply.

Ruth Borneman MacLeod

The Training School
Vineland, New Jersey

Are you interested?

We have recently reclassified and filed all of the reserve stock of The Training School Bulletin. We have a few extra copies of many issues covering twenty years or more. If anyone desires to have any of these Bulletins, we will be glad to send them. Not every volumn is complete. —Editor

Notes from the News Sheet*

On Wednesday we entertained a large group of students from Glassboro State Teachers College. We had a very special program for their entertainment.

We had morning assembly this week.It has been some time since we have had assembly because we were quarantined for Mumps. We were all glad to get back to the fun we always have. We have a lot of new songs we want Mr. Nash to teach us.

We can hardly wait to see the Minstrel Show which the Civic Glee Club is holding in Garrison Hall on Wednesday night. Mr. Nash is the Director of the Glee Club and there are lots of our men who sing, so of course, that makes it more interesting for us. It was given in town last week and we heard that there are lots of good jokes and fun besides the fine singing.

The Wilbur girls were glad we were able to see Micky Rooney in "Andy Hardy's Secretary," followed by a comedy in technicolor. There also has been other entertainment, that we all thoroughly enjoyed. It certainly seems as though Spring were in the air. One way is that you see the lawns being raked, as well as the farmers preparing the gardens for spring plantings.

Josie and I celebrated our birthdays on Valentine's Day with a grand party. Our Day Room was decorated with red and white and our tables were beautiful. We had a lot of fun with a Jack Horner House with red satin ribbons hanging from it. We pulled the ribbon and on the end was a very nice surprise gift for each girl. We had delicious refreshments and Josie and I blew out the candles on the cake.

All of us Moore girls have enjoyed the nice pictures Mrs. Peterson has showed us and want to thank her for showing them. We all have enjoyed being outside these nice days.

There was a pick-up entertainment at Garrison Hall. Mrs. Aker gave us a delightful solo. Mary Etta recited and the band played several numbers of stirring marches which all of us enjoyed very much.

* These are copies of the notes as gathered by the children for their monthly News Sheet. —Editor.